DIPPR Evaluated Process Design Database

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Since 1980 the Design Institute for Physical Property Data® has sponsored Project 801 with the goal to develop and maintain a critically-evaluated compilation of thermophysical properties of important industrial chemicals. Four foundational principles: industrial sponsor control, critical evaluation, consistency, and completeness, have guided the development of the database into what is arguably the best process design database in the world. The effectiveness and thoroughness of the implementation of these principles have been substantially enhanced by new methods and tools developed since Project 801 moved to Brigham Young University in January of 1998.

In addition to these improvements, which principally impact the quality of the database through the input and evaluation activities of the project, several tools and functionalities which enhance the usability of the database have been implemented. The database has been transferred to a relational-database format (using Access® 97) which greatly enhances viewing and data-retrieval capabilities. Also, two interfaces to the database have been developed. The first of these is a web-based interface which provides quick access to the accepted values of property constants and temperature-dependent correlation coefficients as well as to the raw data. This interface also has powerful search and graphing capabilities, and includes a molecular display module which enables viewing of any compound in the database in 2-D and 3-D formats. The second interface is a Windows-based program which has convenient search, display, graphing, and comparison capabilities. Capabilities of the relational database and these two interfaces will be demonstrated.